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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,121	06/28/2006	Carole Baubet	283425US0PCT	5540

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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ROBINSON, LAUREN E

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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04/17/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/562,121	<b>Applicant(s)</b> BAUBET ET AL.	
	<b>Examiner</b> LAUREN ROBINSON	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on January 22, 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 29-35 is/are pending in the application.
- 4a) Of the above claim(s) 29-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 32-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/22/2009</u> .   | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1/24/08, 1/10/06, 12/23,05, 5/2606.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 is rejected as being indefinite because of the broad limitations followed by narrow limitations. The broader limitation glazing and the narrower limitation laminated glazing and double-glazing are both recited and from this, the metes and bounds of applicants' claim is thus unclear. For applying prior art, the claim is being interpreted as one of the glazings recited must be present and will be examined as such.

### ***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 9-11, 15 and 32-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Harris et al. (US Pub. No. 2002/0155299).

**Regarding claim 1:** Harris et al. teach a substrate with a thin film coating thereon (abstract, 0040). The coating is taught to be crystalline (0044, 0049, 0050) and can be made to have a RMS roughness of 1nm or less (0015). While the reference does not explicitly state the percentage of the film which is crystalline, the examiner notes that it would be well recognized in the art that since the reference does not provide any indication otherwise, by stating that the layer is a "crystalline layer" would be understood to correspond to 100% crystalline. Further, the examiner notes that while Harris et al. specifically recites that the layer is made of semiconductor materials and not specifically a "dielectric" layer as claimed, the taught coating would still meet applicants' claim. For instance, the discussed material to make the layer which is considered as a semiconductor within the reference can be zinc oxide, silicon oxides, etc. (0034) which is the same as recited by applicants' to correspond to their claimed dielectric (0027-0028).

Additionally, claim 1 is a product by process claim as it recites the manner in which the coating is produced which includes the sputtering in the presence of oxygen and/or nitrogen with exposure to an ion beam. According to the MPEP, while the process might limit the product it does not provide patentable weight and if the product in the claim is the same as or obvious from a product of the prior art, the claim is

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unpatentable even though the prior product might have been made by a different process. MPEP 2113. In the instant case, as it is illustrated above that the coated substrate within Harris is substantially the same and it does not appear that the process would materially change the product, the claim is met **(Claim 1)**.

**Regarding claim 2:** As discussed, the limitation regarding the sputtering with an ion beam is part of the process and does not have to be taught within the prior art and since it was included above that the RMS roughness of the film is 1nm or less, claim 2 is met **(Claim 2)**.

**Regarding claim 3:** While the ion beam does not have to be recited for the same reasons as above, the examiner notes that claim 3 would still be unpatentable. This is due to the fact that the claim is merely reciting the same layer at two different conditions would have a certain characteristics. However, as already discussed, the layer within the reference and applicants' are both the same and for this reason, one having ordinary skill would reasonably expect them to have the same characteristics when treated similarly. As such, the characteristic from claim 3 would be inherent **(Claim 3)**.

**Regarding claims 4-7:** Further, the fully crystalline layer (100% crystalline) from above can be zinc oxide **(Claims 4-5 and 7)** and as known in the art, zinc oxide and silicon oxides inherently has a refractive index of less than 1.95 **(Claim 6)**.

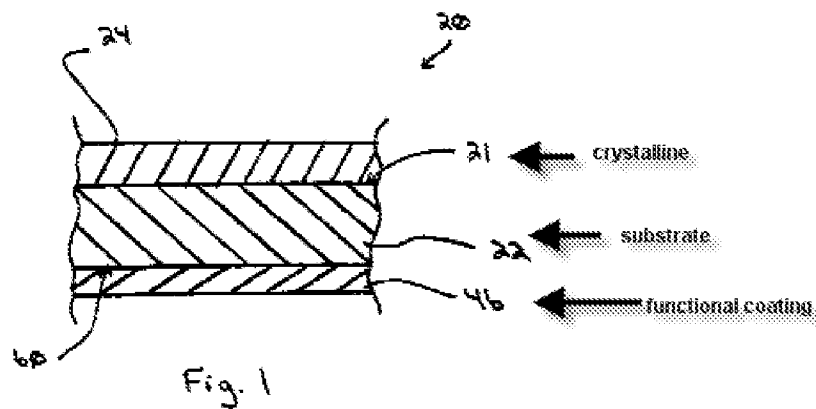
**Regarding claims 9-10:** Although the reference does not specifically recite the percentage of argon within the coating, the examiner notes that it would be well recognized by one having ordinary skill that the claimed range represents trace amounts of argon which would be expected to be inherent when treating in an argon

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atmospheres. In the instant case, the reference teaches that the coating can be made in an argon atmosphere (0050) and as one having ordinary skill would reasonably expect trace amounts of residual argon to occur, it would be recognized as inherent to have a concentration within applicants' claim **(Claim 9)**.

Further, the examiner notes that claim 10 does not make the presence of iron necessary as it recites "less than... 3at%" and such language allows for the coating to comprise 0 at% and still meet applicants' claim. In the instant case, the reference does not make iron necessary thereby; corresponding to 0% can be present meeting applicants' claim **(Claim 10)**.

**Regarding claim 11:** Harris teaches the following coated substrate.



The functional coating can be a multilayer coating which can include a silver layer (0057-0058). The examiner notes that the above Figure meets applicants' claim 11 for the following reason. Claim 11 recites that the substrate is coated with such a multilayer with a silver layer being on top of the crystalline dielectric layer which was provided to the substrate prior. However, the claims does not recite a specific order

and/or direct contacting, etc. of such layers, including ones like substrate/dielectric/silver. Rather, the claim merely recites that the substrate is coated with both and that the structure has an orientation in which silver must be over the dielectric, not in direct contact or even on the same side of said substrate. From this, one having ordinary skill would recognize that the above Figure is merely illustrating an upside down view of their laminate and when placed upright, the claimed orientation of dielectric (21)/substrate(22)/silver (46) is present thereby meeting applicants' multilayer the substrate being coated with both and the silver being on top of the dielectric **(Claim 11)**.

**Regarding claims 15 and 32:** Harris et al. also teach that the coated substrate can be used to comprise a laminated glazing assembly (claims) **(Claim 15)** wherein the substrate can be glass (abstract) **(Claim 32)**.

**Regarding claims 33-35:** Also, as discussed the coating is crystalline thereby corresponding to 100% meeting applicants' claim 33 **(Claim 33)** and the RMS roughness is 1nm or less **(Claim 34)**.

As claim 35 relies on the process of claim 1, since the process was not needed to be taught within the reference to meet applicants' claim, the examiner notes that this applies to claim 35 as well. Therefore, since the structure is the same, the claim is unpatentable **(Claim 35)**.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the



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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being obvious over Harris et al. (US Pub. No. 2002/0155299) in view of Seul et al. (US Pub. No. 2003/0082587).

As discussed, Harris et al. teach the invention of claim 1, they do not specifically recite the use of silicon nitride or oxynitride within the crystalline dielectric film although this would have been obvious.

For example, it was discussed that the dielectric layer within Harris can be silicon oxide and additionally, Harris is illustrating throughout that the purpose of the dielectric layer is hydrophilic properties (all). However, the examiner notes that it is very well known in the art that materials such as silicon oxynitride and silicon oxides are functional equivalents in terms of being hydrophilic which is illustrated by Seul et al. (0057). For this reason, the examiner notes that one having ordinary skill would see that both materials could be used interchangeable to provide the same results. As such, it would have been obvious to one having ordinary skill in the art at the time of invention to modify Harris to include that the dielectric layer can be that of silicon oxynitride to obtain desired hydrophilic properties (**Claim 8**).

4. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being obvious over Harris et al. (US Pub. No. 2002/0155299) in view of Krisko (US PN. 6,060,178).

As discussed, Harris et al. teach the invention of claim 1, they do not specifically recite the use of a second dielectric layer placed on top of the silver layer, the multilayer functional coating having two silver layers of the claimed surface resistance although all these limitations would have been obvious.

For example, Harris is illustrating that the multilayer coating can be a low emissive coating, as well as included silver layers having barrier films over and/or under the silver. While Harris does not provide a specific layered orientation, such as two silvers or specifically dielectrics above, this would have been obvious to one having ordinary skill as it is known that such an orientation is typical in low e films. Specifically, Krisko teaches a heat temperable glass article wherein a low e film comprising two silver layers having barrier films above and/or below is used and in particular, each has a dielectric layer placed over the silver (title, abstract, Col. 2, lines 40-60, Figures). Additionally, they teach that such low emissivity related to surface resistance and by obtaining such a multilayer, the resistance can be lowered to 5 ohms/square, 3.5 ohms/square, etc. and thereby provide desired lower emissivity (Examples).

As both Harris and Krisko disclose analogous art related to low e coatings comprising silver layers with barriers above and/or below said silver. The examiner notes that one having ordinary skill in the art would recognize that since Harris does not provide a specific orientation, but merely that similar low e coatings can be used, if one desired to produce a desirable low e coating they would see from Krisko that a multilayer having two silver layers, another dielectric layer being above the silver, and a low surface resistance could be used to produce desirable results. As such, it would have been obvious to one having ordinary skill in the art at the time of invention to modify Harris to include that the multilayer can have an additional dielectric above the silver, a second silver layer and be made to have a low surface resistance of 5 or even

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3.5 ohms/square in order to obtain a heat temperable transparent article with desirable low emissivity (**Claims 11-13**).

***Response to Arguments***

Applicant's arguments filed January 22, 2009 have been considered but are moot in view of the new ground(s) of rejection thereby, making the following action **Non-Final**.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAUREN ROBINSON whose telephone number is (571)270-3474. The examiner can normally be reached on Monday to Thursday 6am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lauren E. T. Robinson  
Examiner  
AU 1794

/LAUREN ROBINSON/  
Examiner, Art Unit 1794

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